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# PATENT SPECIFICATION

802,981



*Date of filing Complete Specification : Nov. 1. 1955.*

*Application Date : Nov. 23, 1954. No. 33949/54.*

*Complete Specification Published : Oct. 15, 1958.*

## ERRATUM

SPECIFICATION NO. 802,981

Page 1, line 3, for "Zip" read "Zipp".

THE PATENT OFFICE,  
23rd March, 1959

DB 10172/2(4)/3746 150 3/59 R

British Subject, HENRY DAVID ROFFEL, a British Subject, and AERO ZIP FASTENERS LIMITED, a British Company, all of Severn Road, Treforest Trading Estate, Pontypridd, Glamorganshire, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The present invention relates to tapes for sliding clasp fastenings incorporating such tapes.

We aim at a way of adopting these tapes, which may be of the standard beaded edge form (if desired after equipment with the fastening elements or after embodiment in a finished fastener), for secure and lasting connection adhesively by heat and pressure to material or an article to which they are to be applied, rather than to have to employ specially woven tapes, e.g., including threads of thermoplastic material, or necessitating coating or impregnating the tape with thermoplastic material.

To the foregoing ends, the present invention provides a tape for a sliding clasp fastening having a strip of textile material stitched longitudinally onto the tape, said strip having a coating of thermoplastic material whereby the strip may be secured, when the thermoplastic material is sufficiently heated, to an article or material to which the tape is to be attached, the strip and stitching being formed of cotton or other threads which will not become plastic or scorch under the heat treatment. The strip is preferably of a more openly woven fabric than the tape.

The strip may be stitched to the tape by herring bone or lattice stitching.

[Pri-

tact between the slider and the strip the strip is preferably located on the margin of the tape other than that which is formed to receive, or carries, the fastening elements. Particularly in such a form the strip may be coated on both sides, although a coating on only the face which is exposed is preferred, leaving the face which directly contacts the tape uncoated. The strip is preferably coated before being stitched.

The stitching preferably extends medially along the strip.

In order that the invention may be the more readily understood, reference is made to the accompanying drawing which illustrates by way of example a fastener tape according to the invention when fitted with fastener elements.

The tape 1 is of ordinary construction with a beaded edge 2 carrying the well known fastener element 3. The strip 4 has been woven of more open form than the tape of cotton or other threads which will not become plastic or scorch during the heat treatment which is hereinafter described. The threads may be parallel to and at right angles to the length of the tape. The strip has been given a coating 5 of a thermoplastic material, for example a polyvinyl chloride dope incorporating a plasticiser and non-tacky at ordinary temperatures, a suitable thermo-plastic dope is a vinyl resin in the form of a co-polymer of vinyl chloride and vinyl acetate say 25 parts by weight; dibutyl phthalate as a plasticiser say 10 parts by weight and a stabiliser to absorb hydro-chloric acid which is liberated in small amounts in the heat treatment, say 3 parts by weight; and as solvent, methyl ethyl ketone, say 98.2 parts by volume.

# PATENT SPECIFICATION

802,981



*Date of filing Complete Specification : Nov. 1, 1955.*

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*Complete Specification Published : Oct. 15, 1958.*

Index at Acceptance :—Class 44, BE4E.

International Classification :—A44b.

## COMPLETE SPECIFICATION.

### Improvements in and relating to Sliding Clasp Fastenings and Tapes therefor.

We, WILLIAM JAMES PAUL CLARKE, a British Subject, HENRY DAVID KOPPEL, a British Subject, and AIRO ZIP FASTENERS LIMITED, a British Company, all of Severn Road, Treforest Trading Estate, Pontypridd, Glamorganshire, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The present invention relates to tapes for sliding clasp fastenings incorporating such tapes.

We aim at a way of adopting these tapes, which may be of the standard beaded edge form (if desired after equipment with the fastening elements or after embodiment in a finished fastener), for secure and lasting connection adhesively by heat and pressure to material or an article to which they are to be applied, rather than to have to employ specially woven tapes, e.g., including threads of thermoplastic material, or necessitating coating or impregnating the tape with thermoplastic material.

To the foregoing ends, the present invention provides a tape for a sliding clasp fastening having a strip of textile material stitched longitudinally onto the tape, said strip having a coating of thermoplastic material whereby the strip may be secured, when the thermoplastic material is sufficiently heated, to an article or material to which the tape is to be attached, the strip and stitching being formed of cotton or other threads which will not become plastic or scorch under the heat treatment. The strip is preferably of a more openly woven fabric than the tape.

The strip may be stitched to the tape by herring bone or lattice stitching.

[Pri-

To promote flexibility of the tape adjacent to the fastening elements and to avoid contact between the slider and the strip the strip is preferably located on the margin of the tape other than that which is formed to receive, or carries, the fastening elements. Particularly in such a form the strip may be coated on both sides, although a coating on only the face which is exposed is preferred, leaving the face which directly contacts the tape uncoated. The strip is preferably coated before being stitched.

The stitching preferably extends medially along the strip.

In order that the invention may be the more readily understood, reference is made to the accompanying drawing which illustrates by way of example a fastener tape according to the invention when fitted with fastener elements.

The tape 1 is of ordinary construction with a beaded edge 2 carrying the well known fastener element 3. The strip 4 has been woven of more open form than the tape of cotton or other threads which will not become plastic or scorch during the heat treatment which is hereinafter described. The threads may be parallel to and at right angles to the length of the tape. The strip has been given a coating 5 of a thermoplastic material, for example a polyvinyl chloride dope incorporating a plasticiser and non-tacky at ordinary temperatures, a suitable thermo-plastic dope is a vinyl resin in the form of a co-polymer of vinyl chloride and vinyl acetate say 25 parts by weight; dibutyl phthalate as a plasticiser say 10 parts by weight and a stabiliser to absorb hydro-chloric acid which is liberated in small amounts in the heat treatment, say 3 parts by weight; and as solvent, methyl ethyl ketone, say 98.2 parts by volume.

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The width of the strip is about one-half that of the tape. The coated strip is secured with one longitudinal edge 6 co-terminus with the longitudinal edge of the tape remote from the beaded edge 2 by means of longitudinal herring bone or lattice stitching 7 medially along the length of the strip, the stitching thread being of cotton or other thread which will not scorch or become plastic under the heat treatment. The coating is applied only to the exposed face of the strip, leaving the other face of the strip which is in contact with the tape uncoated.

The material, indicated by 8, to which the tape is to be joined, e.g., a margin of an article along a slot or slit to be opened by the fastener, is laid on the coated side of the strip and heat and pressure are applied so as to join the material securely to the strip, and hence to the tape. Under the heat treatment the thermoplastic material may impregnate the relatively open woven fabric material of the strip (if it has not already done so) and a highly satisfactory join is obtained leaving the tape unstiffened in the region of the fastening elements.

The material 8 aforesaid may be fabric, or any other suitable material, and if desired may itself be of a thermoplastic material, such as polyvinyl chloride. The material may be part of any suitable article, e.g., an article of clothing or a bag or other container.

The coated strip can be applied to stock tapes and to any ordinary type of finished fastener which may be in stock and the method is essentially a clean one and presents no difficulty in application. The strips may be cut from coated sheet or web material.

#### WHAT WE CLAIM IS:—

1. A tape for a sliding clasp fastening having a strip of textile material stitched longitudinally onto the tape, said strip having a coating of thermoplastic material whereby the strip may be secured, when the thermoplastic material is sufficiently heated,

to an article or material to which the tape is to be attached, the strip and stitching being formed of cotton or other threads which will not become plastic or scorch under the heat treatment.

2. A tape according to Claim 1, in which the strip is of a more openly woven fabric than that of the tape.

3. A tape according to Claim 1 or 2 in which the strip is stitched to the tape by herring bone or lattice stitching.

4. A tape according to any of the preceding claims in which the strip is narrower than the tape and is located along the margin of the tape other than that which is formed to receive the fastening elements.

5. A tape according to any of the preceding claims in which the strip has been coated prior to stitching, e.g., has been cut from a sheet or web of coated material.

6. A tape according to any of the preceding claims in which the strip is coated with the thermoplastic material only on the face which is exposed, leaving the face which directly contacts the tape uncoated.

7. A tape according to any of the preceding claims in which the stitching extends medially along the strip.

8. A tape according to any of the preceding claims when fitted with fastening elements along one edge.

9. A sliding clasp fastening incorporating tapes according to Claim 8.

10. An article incorporating a sliding clasp fastening according to Claim 9 and wherein the tapes of the fastening have been secured to the article by making the strips adhere to the material of the article by heat and pressure.

11. A tape for a sliding clasp fastening substantially as herein described with reference to and as illustrated in the accompanying drawing.

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Patent Agents for the Applicants.

#### PROVISIONAL SPECIFICATION.

#### Improvements in and relating to Sliding Clasp Fastenings and Tapes therefor.

We, WILLIAM JAMES PAUL CLARKE, a British Subject, HENRY DAVID KOPPEL, a British Subject, and AERO ZIP FASTENERS LIMITED, a British Company, all of Severn Road, Treforest Trading Estate, Pontypridd, Glamorgan, do hereby declare this invention to be described in the following statement:—

The present invention relates to tapes for sliding clasp fastenings and particularly to tapes intended to be adhesively secured under heat and pressure to the material or article to which they are to be applied.

We aim at a way of adapting these tapes which may be of the standard beaded edged form, if desired after equipment with the

fastener elements, or the tapes of a finished fastener, for secure and lasting connection to material or an article as aforesaid rather than to have to be specially woven tapes, 5 e.g., including threads of thermoplastic material, or requiring to be such that thermoplastic material can be effectively applied to the tape by coating or impregnation which, if not carefully carried out, may make the 10 fastener tape too rigid in the proximity of the fastening elements and prevent satisfactory functioning of the fastening.

To the foregoing ends, the present invention is characterized in that a strip of textile 15 material preferably of more open structure than that of the tape itself and of cotton or other threads which will not become plastic or scorch under the heat-sealing treatment is coated with a thermoplastic 20 material which will heat-seal with the article, and the coated strip is stitched to the tape so that the coated face of the strip is exposed for heat sealing to the article.

The coated strip can be applied to stock 25 tapes and to any ordinary type of finished fastener which may be in stock and the method is essentially a clean one and presents no difficulty in application. The strips may be cut from coated sheet or web 30 material.

By way of example, the coating, e.g., of polyvinyl chloride dope incorporating a plasticiser may be applied to an open weave

cotton fabric material and is preferably 35 non-tacky at normal temperatures and the coated cloth strip may be of a width about one-half of the width of the tape and secured with one longitudinal edge co-terminus with the longitudinal edge of the tape remote 40 from the fastener elements (or bead) by a central row of stitching, e.g., herring bone or lattice stitching. The stitching may be done with the aid of cotton or other thread of natural fibres which will withstand the 45 heat-sealing treatment without becoming plastic or scorching.

The strip may be coated on one or both sides.

The strip may be sealed or adapted to be 50 sealed under heat and pressure to an article which is itself of a thermoplastic material, e.g. polyvinyl chloride, or to a fabric material (such as a woven fabric) e.g., to an 55 article of clothing, or to any other suitable material.

We have referred to a coated strip, but it is to be understood that the thermoplastic material may impregnate the strip, or im- 60 pregnate the strip and provide a surface coating on one or each side.

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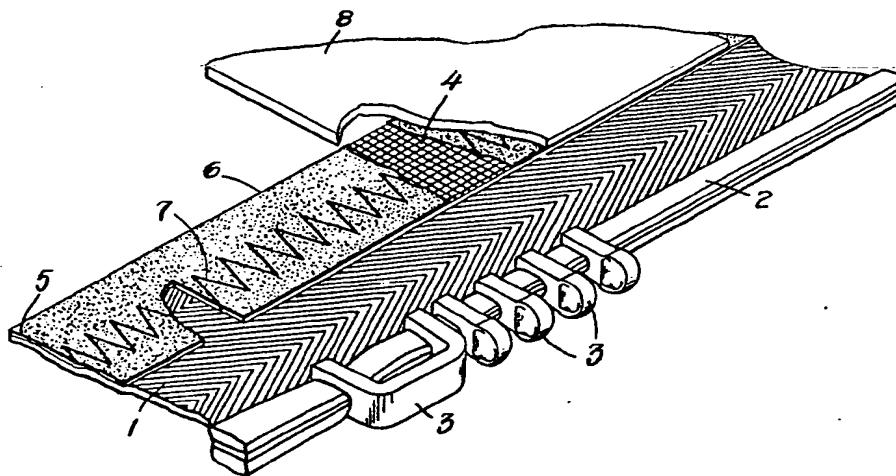
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802,981 COMPLETE SPECIFICATION

1 SHEET

*This drawing is a reproduction of  
the Original on a reduced scale.*





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